



## Epidemiologic Notes & Reports

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### DATA from K.H.I.E.S.

A striking finding of the Kentucky Health Interview and Examination Survey<sup>1</sup> is the percentage of Kentuckians who are overweight. Clinical measurements on persons ages eighteen and over who participated in this study showed that 55% met a standard definition of obesity as determined by a body mass index calculation. This compares to being at least 20% above midrange on life insurance health/weight tables.

Percentages of those obese are:

Male - 55.8% Female - 55.5% Total cohort - 55.5%

The following exhibits show percentages of obese males and females.

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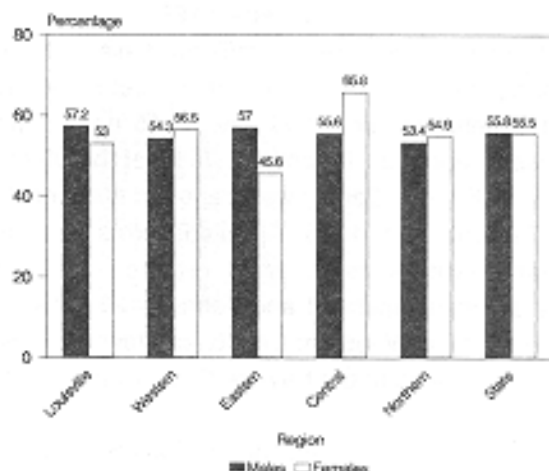
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**Table 1. Obesity by Gender and Income Group  
KHIES Clinical Survey, 1993.**

Income Group	Male	Female	Total Population
\$10,000	58.7	51.6	54.5
\$10,000-14,999	67.0	42.0	53.2
\$15,000-19,999	63.3	48.5	54.2
\$20,000-24,999	61.9	50.9	56.3
\$25,000-29,999	50.0	67.4	58.6
\$30,000-49,000	50.6	64.1	56.6
\$50,000	59.6	66.8	63.2

Those with a family income of \$50,000 or more had the highest percentage of obese persons.

**Figure 1. Obesity by Gender and Region,  
KHIES Clinical Survey, 1993.**



In this analysis, the highest percentage of obesity was in females in the Central Kentucky region.

Current health education efforts address the problem of obesity through promotion of both physical exercise and better nutrition habits. These two factors will be examined further in subsequent issues.

<sup>1</sup> Kentucky Health Interview and Examination Survey published by the Department for Health Services June, 1995; copies available on request.

## Selected Sexually Transmitted Diseases, Kentucky, 1995

In calendar year 1995, Kentucky experienced a decline in the number of early syphilis cases and gonorrhea cases compared to those reported in 1994. However, *chlamydia trachomatis* infection showed a sharp increase. A comparison of 1995 and 1994 case reports for these infections is contained in the table which follows:

Disease	1995	1994	Difference	Percent Change
Primary/Secondary Syphilis	185	208	- 23	-11.1
Early Latent Syphilis	137	179	- 42	- 23.5
Early Syphilis	322	387	- 65	- 16.8
Congenital Syphilis	8	13	- 5	- 38.5
Gonorrhea	4760	5127	- 367	- 7.2
<i>Chlamydia trachomatis</i>	6704	5630	+ 1274	+ 22.5

One or more early syphilis cases were reported from twenty (20) counties compared to 28 counties in 1994. However, of the 322 early syphilis cases reported in 1995, 209 (65%) occurred in Jefferson County. This represents an 18% decrease from the 256 cases reported in 1994, and continues the downward trend shown in Jefferson County since 1993 when 373 occurred. Fayette County showed an increase of 120% in reported cases in calendar years 1995 over 1994, (90 and 41 cases respectively). This increase in Fayette County cases can be attributed to an outbreak which gained impetus in June, 1995, when 15 early syphilis cases were reported. In fact, 64 (71%) of the 90 cases reported by Fayette County were reported between June 1 and December 31, 1995. [Editorial Note: Fourteen (14) early syphilis cases were reported in Fayette County between January 1 and February 29, 1996. Six (6) early cases in Woodford County and four (4) in Scott County were linked to the Fayette County outbreak.]

The 185 primary or secondary (infectious) syphilis cases reported in Kentucky in 1995 resulted in an incidence rate per 100,000 population of 5.0. The national rate for infectious syphilis in 1994, the most recent year for which data are available, was 8.1 per 100,000 with Kentucky ranking eighteenth, among the states, with a rate of 5.6 per 100,000 population.

Congenital syphilis declined from 13 reported cases in 1994 to 8 in 1995. Six (6) of the reported cases were

in infants less than one year of age. Fayette and Jefferson Counties each reported three (3) cases in newborns for the year. Lack of adequate prenatal care was documented for five of these babies.

Gonorrhea continued its general downward trend. The 4,760 cases reported statewide in 1995 resulted in a rate per 100,000 population of 128.6. In 1994, Kentucky ranked twenty-fourth nationally with a rate of 137.3. The national rate for gonorrhea in 1994 was 168.4. A review of the 1995 data for gonorrhea shows a male to female ratio of 1.15:1 (2,549 males and 2,211 females). Persons under 20 years of age accounted for 1,559 (32.7%) cases. The number of cases reported among minority (non-white) populations was 3,947 (82.9%) which indicates that gonorrhea incidence is greatest in populations that are socially and economically compromised.

Chlamydia infection is clearly the most prevalent sexually transmitted disease with an estimated 3-4 million cases occurring in the United States annually. Chlamydia, like gonorrhea, poses very serious health threats to both males and females but women and the babies they bear are the adversely affected. Chlamydia, like gonorrhea, frequently presents asymptotically in women and if left undetected and untreated can result in serious health conditions such as pelvic inflammatory disease, ectopic pregnancy, intense pain, extensive damage to ovaries and fallopian tubes, and other conditions which seriously threaten reproductive health.

Babies born to infected mothers are at risk for infection of the eyes and pneumonia associated with perinatal transmission of disease. Chlamydia has been targeted nationally for reduction primarily due to improved testing procedures. In 1994, Kentucky began an extensive screening program to identify chlamydia infection in patients attending prenatal, family planning, STD, and other health care clinics operated by local health departments. The 6,904 cases of chlamydia reported in Kentucky in 1995 were largely the result of this screening initiative. In fact, 4,761 (69%) of reported cases were identified among persons in a screening program.

Treatment regimens currently used for STD infections have greatly improved due to the use of single-dose antibiotics which enable directly observed therapy. No longer is it necessary to place a patient on a regimen which requires multiple antibiotic doses over a 7-10 day

period. The current recommendation for patients diagnosed with or suspected of having gonorrhea infection is ceftriaxone 125 mg IM, or 400 mg cefixime, or 500 mg ciprofloxacin in a single dose. Chlamydia is managed very effectively with 1 gram of azithromycin mixed with two ounces of water and taken orally. These newer medications are much more costly than the previous penicillin, spectinomycin, tetracycline, doxycycline and erythromycin regimens, but 100% compliance in therapy is virtually assured. These antibiotics are supplied by the Kentucky Sexually Transmitted Disease Program to local health departments at no cost. A health care provider interested in receiving a copy of the 1993 Treatment Guidelines for STD infection can do so by contacting the Kentucky STD Program at (502) 564-4804 or sending a mailed request to: Kentucky STD Program, 275 E. Main St., Frankfort, KY 40621.

### Rabies in Kentucky - 1995

No human cases of rabies have been reported in Kentucky since 1979, however, rabies still exists in our animal population. In 1995, the Division of Laboratory Services and the Breathitt Veterinary Center tested 1600 animal specimens for evidence of rabies. There were 28 (>2%) positives; 5 (18%) of the positive cases were domestic animals and the other 23 positive cases were wildlife. (Table 1.) Humans were known to be exposed by 12 (43%) of the positive animals, and there were 10 (36% of positives) known exposures to domestic animals by positive skunks. More cases were confirmed in August than in any other month; eight (29%) of the positive cases were diagnosed in August and all these were wildlife.

**Table 1. Animals Submitted for Testing and Number of Positives by Species**

Species	Dogs	Cats	Other Domestic	Bats	Skunks	Other Wildlife
Submitted	550	443	141	58	52	356
Positive	3	0	2*	8	15	0
Percent Positive	0.5	0	1.4	13.8	28.8	0

\*1 horse, 1 cow

Rabies positive specimens were reported more frequently mainly from the Central Bluegrass and west central parts of the state. Two bats were the only positives reported from the eastern portion of the state as shown in Figure 1 (page 6). This statewide distribution pattern may not be completely representative; it may only reflect the distribution of samples submitted for testing.

Preexposure prophylaxis is appropriate for anyone whose occupation (veterinary workers, animal control, biologists) may predispose them to contact with rabid animals. Also, travelers to certain countries (e.g. India) with a high incidence of rabies may wish to be preimmunized.



Preexposure prophylaxis protects individuals from unknown exposures and shortens the course of postexposure treatment if exposed to a known rabid animal. Intradermal Human Diploid Cell Vaccine (0.1 ml) is the vaccine of choice; it is effective, has minimal side effects, and is less expensive than the intramuscular vaccine.

Postexposure prophylaxis (PEP) is indicated for exposure to known or suspected rabid animals. PEP is expensive, time consuming, and not totally without risk, and should only be given if an exposure has occurred. An exposure results from a bite that breaks the skin, or if animal saliva (or nervous system tissue) comes in contact with an open wound or mucous membrane. Blood, urine, feces, and saliva that has dried are not considered infective. Most true exposures are obvious with the exception of bat bites. Apparently, bat bites may be so innocuous that they escape detection by the person bitten. Most of the recent human rabies cases in the United States have been associated with bats (determined from DNA mapping), however, no history of exposure was elicited from friends or relatives in many of the cases.

Problems with determining treatment needs arise from failure to determine the disease status of the biting animal. Rabies status of the animal can only be detected by euthanizing the animal and testing the brain for rabies virus, or by quarantining dogs or cats for 10 days. Anyone suffering a bite exposure should call the local health department which will immediately quarantine a healthy dog or cat, or arrange for an animal's brain to be tested for rabies. Unfortunately, many individuals respond to animal bites inappropriately; the animal is allowed to escape, or in the heat of anger, the animal is killed by clubbing or shooting in the head. The brain is destroyed and testing can not be performed. There will always be situations in which the offending animal can not be found or captured, but these cases should be rare. A survey of rabies biologics ordered from the Department's vaccine depot by local health departments in 1994 showed that in 83.5% (81 out of 97) patients receiving PEP, no animal quarantine or laboratory testing was performed. Only 13 patients out of 97 receiving PEP actually had contact with a known rabid animal, and only four of these individuals had exposure to animal saliva

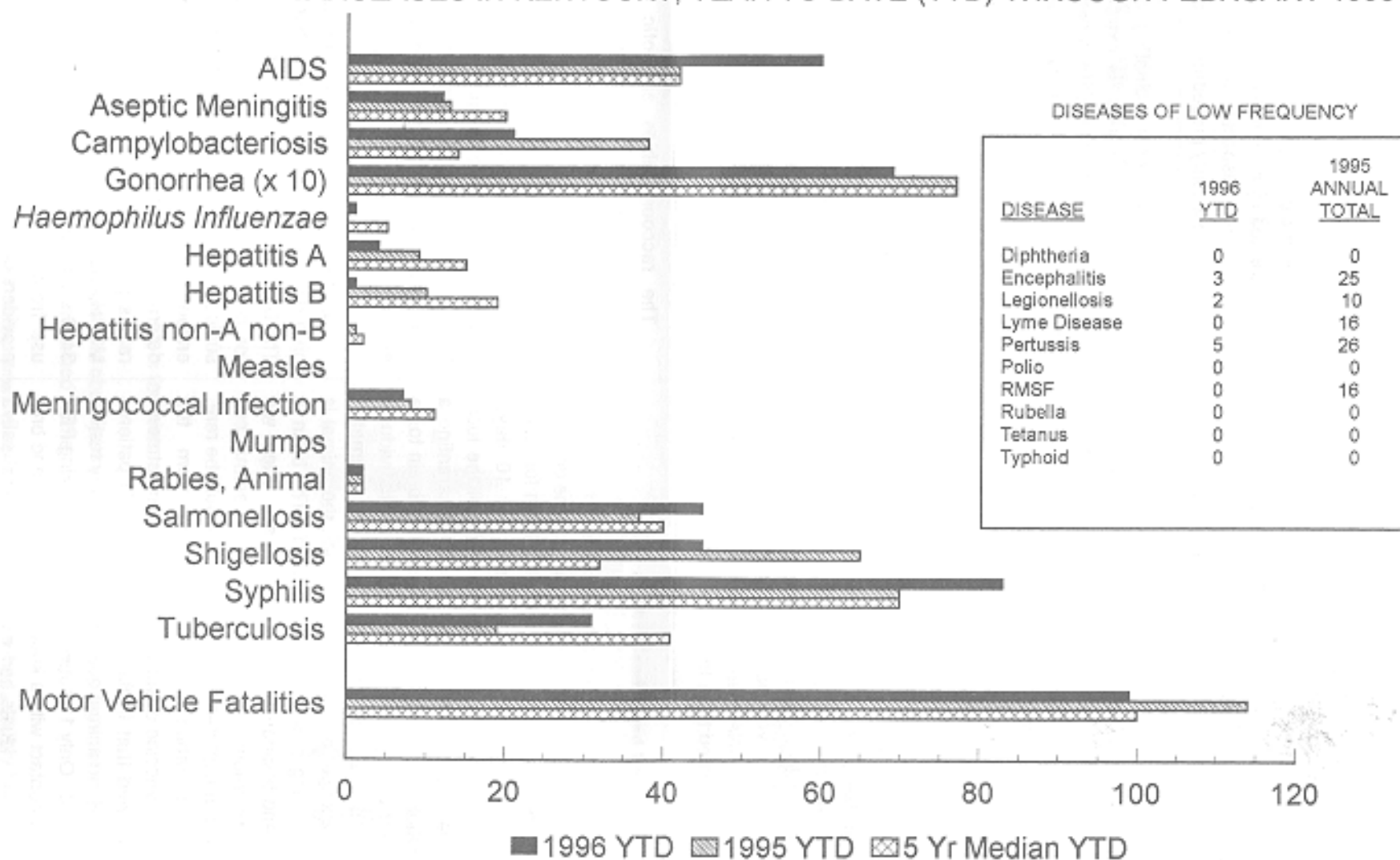
through a bite, open wound, or mucous membrane. The exposure history for persons receiving PEP by private providers is unavailable, but probably is similar to that of patients treated by local health departments. Quarantine or testing of the suspected animal in each case would eliminate unnecessary procedures and expense.

The necessity of vaccinating domestic animals, particularly dogs and cats, is extremely important to prevent the spread of wildlife rabies into the human population. There is an approved vaccine available for ferrets and should be used for all pet ferrets. (This does not mean that ferrets can be quarantined for observation, and it still may be necessary to sacrifice them for testing.) Other rabies vaccines are available for the protection of horses, cattle, and sheep, and their use may be desirable if wildlife rabies is a problem in the area. There are no approved rabies vaccines available for wildlife including wolf hybrids; keeping of any wildlife or wildlife hybrid as a pet is strongly discouraged. An oral vaccine used to control wildlife rabies epizootics is conditionally approved, but may only be used by state and federal agencies for the control of selected epizootics.

The raccoon rabies epizootic of the East and Southeast has not yet spread to Kentucky. However, rabid raccoons have been found in Virginia within 50 miles of the border. In areas with the raccoon rabies epizootic, the number of rabid cats exceeds the number of rabid dogs. Since Kentucky does not require cat vaccination, and there are large numbers of free-roaming farm cats, an increase in rabies in raccoons and cats could lead to a dramatic increase in the number of people exposed to rabies.

Most health care workers do not use rabies biologics on a daily basis and may not be familiar with their use. The Division of Epidemiology received over 400 requests for consultation on rabies, animal bites, and related subjects last year, and is very familiar with the problems encountered in the field. If you need assistance in determining exposure status or in using the available rabies products, please call Michael Auslander, DVM, MSPH, State Public Health Veterinarian at (502)564-3418. Vaccine is available for local health department use from the vaccine depot, and private health care providers can order vaccine directly by calling Connaught Laboratories at (800)VACCINE.

## SELECTED REPORTABLE DISEASES IN KENTUCKY, YEAR TO DATE (YTD) THROUGH FEBRUARY 1996



Disease numbers reflect only those cases which meet the surveillance definition.

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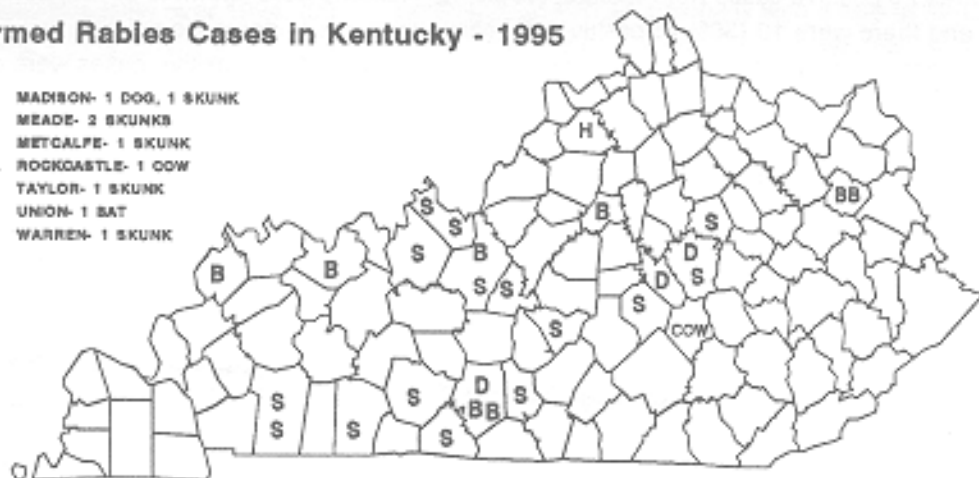
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**Figure 1. Confirmed Rabies Cases in Kentucky - 1995**

ALLEN- 1 SKUNK	MADISON- 1 DOG, 1 SKUNK
ANDERSON- 1 BAT	MEADE- 2 SKUNKS
BARREN- 2 BATS, 1 DOG	METCALFE- 1 SKUNK
BRECKINRIDGE- 1 SKUNK	ROCKCASTLE- 1 COW
CHRISTIAN- 2 SKUNKS	TAYLOR- 1 SKUNK
CLARK- 1 SKUNK	UNION- 1 BAT
DAVIESS- 1 BAT	WARREN- 1 SKUNK
ELLIOT- 2 BATS	
GARRARD- 1 DOG	
HARDIN- 1 BAT, 1 SKUNK	
HENRY- 1 HORSE	
LARUE- 1 SKUNK	
LINCOLN- 1 SKUNK	
LOGAN- 1 SKUNK	



**1995 Physician Award**

On February 23, 1996, Dr. Reginald Finger, Director of the Division of Epidemiology, presented to Dr. Steven Sterneberg, Dry Ridge, Kentucky, the third annual "Best Notifiable Disease Reporter Award." This award recognizes a physician who has made an outstanding contribution during the previous year to the prevention and control of communicable diseases.